Reasoning and Aptitude

The question in this section will cover logical reasoning and quantitative aptitude. Some of the questions will be on comprehension of logical situation and questions based on the facts given in the passage.

Model Question Paper of MCA Entrance Test

SECTION – I

(Elementary Computer Knowledge)

1. UNIVAC is
   a) Universal Automatic Computer
   b) Universal Array Computer
   c) Unique Automatic Computer
   d) Unvalued Automatic Computer

2. The brain of any computer system is
   a) ALU
   b) Memory
   c) CPU
   d) Control unit

3. Storage capacity of magnetic disk depends on
   a) tracks per inch of surface
   b) bits per inch of tracks
   c) disk pack in disk surface
   d) All of above

4. Which of the following is not an input device?
   a) OCR
   b) Optical scanners
   c) Voice recognition device
   d) COM (Computer Output to Microfilm)

5. If in a computer, 16 bits are used to specify address in a RAM, the number of addresses will be
   a) 216
   b) 65,536
   c) 64K
   d) Any of the above

6. Instructions and memory address are represented by
   a) Character code
   b) Binary codes
   c) Binary word
   d) Parity bit

7. Mnemonic a memory trick is used in which of the following language?
    a) Machine language
    b) Assembly language
    c) High level language
    d) None of above
8. BCD is
    a) Binary Coded Decimal
    b) Bit Coded Decimal
    c) Binary Coded Digit
    d) Bit Coded Digit
9. Properly arranged data is called
    a) Field
    b) Words
    c) Information
    d) File
10. Algorithm and Flow chart help us to
    a) Know the memory capacity\
    b) Identify the base of a number system
    c) Direct the output to a printer
    d) Specify the problem completely and clearly

SECTION – II

(Mathematical Ability)

1. A _____ is an ordered collection of objects.

    a) Relation
    b) Function
    c) Set
    d) Proposition
2. The set O of odd positive integers less than 10 can be expressed by _____
    a) {1, 2, 3}
    b) {1, 3, 5, 7, 9}
    c) {1, 2, 5, 9}
    d) {1, 5, 7, 9, 11}
3. What is the Cartesian product of A = {1, 2} and B = {a, b}?
    a) {(1, a), (1, b), (2, a), (b, b)}
    b) {(1, 1), (2, 2), (a, a), (b, b)}
    c) {(1, a), (2, a), (1, b), (2, b)}
    d) {(1, 1), (a, a), (2, a), (1, b)}

4. If a, b, c are in AP then relation between a, b, c can be
   a) $2b = 2a + 3c$
   b) $2a = b + c$
   c) $2b = a + c$
   d) $2c = a + c$

5. Which of the following statements regarding sets is false?
   a) $A \times B = B \times A$
   b) $A \times B \neq B \times A$
   c) $n(A \times B) = n(A) * n(B)$
   d) All of the mentioned

6. Vertex of an angle in standard form is at
   a) (1,0)
   b) (0,1)
   c) (1,1)\
   d) (0,0)

7. 1 radian =
   a) $57°17'45''$
   b) $1°$
   c) $180°$
   d) $180'$

8. The equation circle $x2 + y2 - 4x + 2y - 20 = 0$ describes:
   a) A circle of radius 5 centered at the origin.
   b) An eclipse centered at (2, -1).
   c) A sphere centered at the origin.
   d) A circle of radius 5 centered at (2, -1).

9. The focus of the parabola $y2 = 16x$ is at
   a) (4, 0)
   b) (0, 4)
   c) (3, 0)
   d) (0, 3)

10. The roots of the equation $3x2 - 12x + 10 = 0$ are?
    a) rational and unequal
    b) complex
    c) real and equal
    d) irrational and unequal

SECTION – III

(Reasoning and Aptitude)

1. In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?
   a) 6.25
   b) 6.5

c) 6.75

d) 7

2. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?

a) Sunday

b) Saturday

c) Friday

d) Wednesday

3. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

a) 4

b) 10

c) 15

d) 16

4. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

a) 4 years

b) 8 years

c) 10 years

d) None of these

5. Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?

a) 2 : 3 : 4

b) 6 : 7 : 8

c) 6 : 8 : 9

d) None of these

6. Two pipes A and B can fill a cistern in 37 minutes and 45 minutes respectively. Both pipes are opened. The cistern will be filled in just half an hour, if the B is turned off after:

a) 5 min.

b) 9 min.

c) 10 min.

d) 15 min.

7. A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :

a) 1/4

b) 1/10

c) 7/15

d) 8/15

8. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

a) 120 metres
b) 180 metres
c) 324 metres
d) 150 metres

9. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:
a) Rs. 650
b) Rs. 690
c) Rs. 698
d) Rs. 700

10. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:
a) 15
b) 16
c) 18
d) 25